VOLUME 7 ISSUE 1 AUGUST 2012

CUSTOMER COMMITMENT

RIFLEMAN RADIO

AN/PRC-154, THE SOLDIER RADIO OF THE FUTURE

The Rifleman Radio is a core component of the Army's soldier modernization program, transmitting voice and data simultaneously utilizing the Soldier Radio Waveform (SRW). The radio is designed to bring secure (Type 2) inter-squad communications to any warfighter on the tactical edge of the battlefield. It creates self-forming, ad hoc, voice, and data networks in any battlefield scenario and enables Team Leaders to track individual soldier position location information, giving dismounted soldiers a much needed situational awareness capability on the battlefield. The Government's SRW has become an integral part of the Army's Joint Tactical Radio System (JTRS) Handheld, Manpack, Small Form Fit (HMS) program.

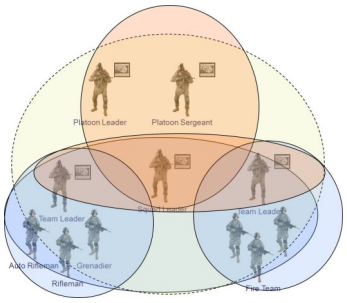
The Rifleman Radio, with its integral GPS receiver, has undergone an extensive series of formal Government tests, including various operational Network Integration Evaluations (NIE). For example, at the recent NIE 12.2 at Fort Bliss, TX and White Sands Missile Range, NM, more than 600 Rifleman Radios were successfully fielded.

A complete operational assessment is being undertaken by the US Army's 75th Ranger Regiment in Afghanistan. In its first combat use, the Rifleman Radio successfully demonstrated how networked communications and situational awareness can improve the soldiers' mission effectiveness.

The soldiers of the 75th Ranger Regiment liked the size, weight, and transmit range of the Rifleman Radio.

The radio and battery typically provides a mission endurance capability of up to 10 hours and it increased the 75th Rangers' ability to communicate, despite obstacles such as buildings and rugged terrain.

Low Rate Initial Production of more than 19,000 radios is underway.



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HAVE YOU VISITED OUR NEW WEBSITE? IT HAS CHANGED!

NEW PRODUCT

MODULAR UNIVERSAL BATTERY CHARGER

The Modular Universal Battery Charger (MUBC) solution is a state-of-the-art, scalable charging system with the ability to charge a wide range of military and commercial batteries and provide for the addition of new batteries through software upgradability and an innovative modular design. The base unit weighs less than 6 pounds, is small enough to be carried in a ruck sack and is rugged enough to be vehicle mounted. The base unit has eight bays and can be cascaded with an identical unit to double the base unit charging capability from a single power source. This system is based on technology from field-proven trials and allows charging in heavy rain and other harsh environmental conditions without cover . The system is optimized to provide the warfighter with the ability to harvest power from solar panels, and scavenge power from partially depleted batteries and a variety of other power sources.

The MUBC combines the functions and capabilities of multiple battery chargers into one small scalable package. It provides battery charging technology to the warfighter through a highly rugged, field-deployable, multi-battery modular solution for austere mission environments.

Capability	User Benefits
Charges multiple batteries: AN/PRC-148, AN/PRC-152, AN/PRC-154	No need for multiple chargers
Charges AN/PRC-154 Rifleman radio with its battery	Network connectivity while charging
Charges AN/PRC-148 and AN/PRC-152 batteries in three hours	Fast charging means fewer chargers per mission
Charges Mobile Computing Devices USB (USB 3.0)	Charging portable USB devices
Harvests power from solar panels, generators, BA-xx90 batteries	Smart input power optimized for solar and alternate sources
Dismounted applications, small size, only 6 lb	Ruck sack portable
Man portable and vehicle mount, small footprint	Fits in multiple vehicles including Stryker, MTVR and HMMWV
MIL-STD-810G compliant	Insert or remove batteries in rain, cover not required
Scalable, add extra 8-bay MUBC in less than one minute	Connect MUBC units to power from single power source
User configurations for charging from AC, DC or BA-2590	Modular to achieve lightest charging solution

16-bay MUBC with AC to DC power supply

MUBC MULTI-PROTOCOL BATTERY COMPATIBILITY		
Battery	**Device(s)**	**8-bay**
AN/PRC -148	JEM/MBITR	4
AN/PRC -152	Harris	4
AN/PRC -154	Rifleman	8
BB-2590	Various	1
LI-145/LI-80	With additional charging strip	3
USB	Smart Phone, Tablet PC etc. with	2

LIBERTY™ MULTIBAND LMR..... TOUGH MISSION.....TOUGH RADIO

EASY TO USE, EASY TO TRAIN, QUICK TO DEPLOY

The Liberty Multiband Land Mobile Radio is a software defined portable radio that enables multi-agency communications in all public safety frequency bands. It operates in Project 25 (P25) conventional, P25 trunked and legacy analog modes with DES, AES and OTAR.

Public safety users typically operate in harsh environments so the Liberty LMR is rugged, meeting MIL-STD-810 specifications. The radio has a MIL-SPEC metal housing, is submersible to two meters and is certified to the Factory Mutual Approval Standard 3610:1988 as Intrinsic Safe. This ensures the radio can be operated around hazardous materials and in explosive environments and that it will not trigger ignition in the presence of flammable or combustible materials.

New Release : Firmware Version 6 Upgrade

To maintain proper compatibility, Release 6.0 version of PC Programmer, V06.00.03.0052 must be installed before upgrading to Release 6.0 Radio Firmware, V06.00.16.0045. The user can upload an existing configuration file saved from a radio with Release 5 Firmware and download it to a Release 6 radio. **Note:** A Release 6 PC Programmer cannot download to a Release 5 radio.

To download the latest PC Programmer, you must enter a valid Sales Order Number which can be found on the original PC Programmer CD, Thales invoice, Thales Packing List or contacting Thales at 1-800-914-0303. Sign-in on the website www.thalescomminc.com and access the Liberty Land Mobile Radio Technical Resource area. In the 'PC Programmer' section, enter the Order Number; after the information has been verified, a link to download the PC Programmer will be displayed.

New radio features in Release 6 firmware

- MDC1200
- MDC Transmit Unit ID
- MDC Transmit Emergency
- MDC Inhibit / Un-inhibit
- Increase from 512 to 2608 Channels / Talkgroups

New PC Programmer features

- Creation of Daughter Keys for secure trunking system access
- Additional Zone Screen Filter to sort by network
- Configuration data Import / Export using Excel compatible file format

To demonstrate just how tough the Liberty radio is, watch the 'TortureVideo' posted on YouTube at
http://www.youtube.com/watch?v=EOvhJKOUStM

THALES IN-THEATER SUPPORT

Thales Communications' Customer Support Department (CSD) has been working very closely with coalition forces, US Army Communications Electronics Command (CECOM) and Computer Sciences Corporation (CSC) to maintain a critical Field Support capability for its locations within Afghanistan and Kuwait. Thales currently has established maintenance depots at Regional Support Centers (RSCs) in Afghanistan at Bagram Airbase, Kandahar and Camp Leatherneck, as well as at Camp Arifjan in Kuwait. Each depot site has permanently assigned Thales field support technicians who can assist with product maintenance, training and technical support requests. For additional information on specific support requirements, or site contact information, please email:

afghanistan.support@thalescomminc.com

kuwait.support@thalescomminc.com

or call Thales Customer Support in Clarksburg, Maryland
at 1-800-914-0303 (or +1 240-864-7643)

OPERATIONAL AND INTERMEDIATE LEVEL TEST SETS

Thales Communications offers an extensive test and maintenance capability for the AN/PRC-148 family of equipment. Maintenance spares, inventory kits, test equipment and specialized training are available to support field and intermediate level maintenance requirements. The available testers, interface cables, and test programs are designed to provide portable GO/NO-GO and intermediate level maintenance capabilities.

The **ATS3000P** is a portable GO/ NO-GO tester hosted on a ruggedized laptop computer. With the test sets' menu driven user interfaces, it provides a consolidated one-man portable test platform that combines the operational capability of many different test instruments. It supports all of the requirements of a man portable, forward deployable Communications Test Set. The size facilitates easy transfer / movement through all vehicular access hatches, and its weight allows one person to easily operate the test set in a stand-alone or automated mode.

The **ATS3000A** is designed for Intermediate level / module replacement maintenance shops and uses a Synthetic Instrumentation (SI) architecture, combining the functions of traditional instruments into a single, software-defined platform. This provides the user with a complete and compact RF, analog and digital test platform. It can be used as a standalone or fully automated test system, with easy to use graphical user interfaces.

Please contact us at 1-800-914-0303 Option 3 or customer.service@thalescomminc.com for additional information for a tailored maintenance program to support your fleet of equipment.

NEW PRODUCT RELEASE:

PJC RETENTION BATTERY

For the AN/PRC-148 JEM, Thales Communications now offers a PJC Retention Battery for long-term storage or transportation delays. The PJC Retention Battery attaches in place of the main battery to ensure the Private Joseki Key (PJC) is retained in the JEM for a minimum of one year, versus the 60-days with a fully charged hold-up battery (HUB). The external PJC Retention Battery trickle charges the HUB to ensure long-term PJC retention and uses four (4) DL123A non-rechargeable Lithium cells (NSN 6135-01-351-1131).

The PJC Retention Battery can be purchased using Thales part number 3101156-502 by contacting Customer Support at: 1-800-914-0303 Option 3 or aftermarket.support@thalescomminc.com

BATTERY REFRESH PROGRAM

Thales Communications has introduced a battery refresh program for the AN/PRC-148 4.8 Ah Lithium-Ion rechargeable battery (**NSN 6140-01-487-1153**, **PN 1600515-7**). Users can return older batteries to Thales Communications for a credit towards the purchase of a new 4.8 Ah battery. We recently conducted a comprehensive analysis of currently fielded AN/PRC-148 rechargeable batteries and concluded that a large percentage of fielded batteries are over five years old and have high charge cycle counts which results in significantly reduced runtimes during radio operation.

Why do older AN/PRC-148 batteries have less runtime?
Lithium-Ion battery technology is one of the most popular types of rechargeable batteries for military and consumer applications and has gained worldwide acceptance due to the many advantages it offers over older Nickel Cadmium technologies. The advantages include no memory effect and low discharge rates. However, one of the disadvantages of this technology is that with every charge cycle the battery capacity is slightly diminished. For example, after about 300 complete charge-discharge cycles, the AN/PRC-148 battery contains about 70 percent of its initial capacity. Additionally, over time during storage, the Lithium-Ion cells will lose a small percentage of their capacity. This is highly dependent on storage temperature, higher storage temperatures accelerate capacity loss.

Therefore, the main reason for loss of runtime is using batteries that have more than 300 cycles of charge and discharge and are typically more than two to five years old.

Of course, this will vary greatly from user to user.

Just before shipment our Quality Department stamps a two digit alpha-numeric date code on the top shoulder of the battery, adjacent to the radio interface connector. The first letter, 'A' through 'M', excluding 'I', represents the month of shipment and the second digit, '0' through '9', represents the year of shipment; example 'D1' represents an April, 2011 shipment, 'G7' represents a July, 2007 shipment. This two digit code is more accurate than the battery's lot number.

To address this reduced runtime issue, we are now offering a $35 turn-in credit towards the purchase of a new 4.8 Ah battery for older batteries returned to Thales.

Please contact us to take advantage of this battery refresh program, or for additional information, by sending an email to
aftermarket.support@thalescomminc.com
Or call Customer Support at: 1-800-914-0303
and select Option 3

Please note: As the Original Equipment Manufacturer, Thales manufactures its own batteries and has NOT approved or authorized any other manufacturer to supply batteries for use with the AN/PRC-148. Please contact us at 1-800-914–0303 with any questions or concerns.

AN/PRC-148 JEM INTEGRATED WAVEFORM [IW] FEATURE IS JITC CERTIFIED

Thales Communications' AN/PRC-148 JEM is certified by the Joint Interoperability Test Command (JITC) for the Ultra High Frequency (UHF) satellite communications (SATCOM) Integrated Waveform (IW).

Thales Communications' SATCOM IW capability eliminates the need for warfighters to carry their existing heavy, manpack tactical radio systems, and enables each member of the team to deploy with a fully interoperable, beyond line-of-sight (BLOS) capability. The JITC certification allows users access to SATCOM IW on their fielded AN/PRC-148 JEMs via software upgrade, producing minimal impact on deployed radios and requiring minimal operator intervention. The IW upgrade provides both commanders and users with increased voice quality, higher data throughput, a more intuitive human-machine interface (HMI), as well as an increased command and control capability on the battlefield, all in a smaller, lighter package.

"The JITC certification is an important milestone for the JEM, bringing both increased capability and significant value to our nation's warfighters," said Michael Sheehan, President and CEO of Thales Communications, Inc. "The JEM radio with SATCOM IW significantly reduces the warfighter's carry load."

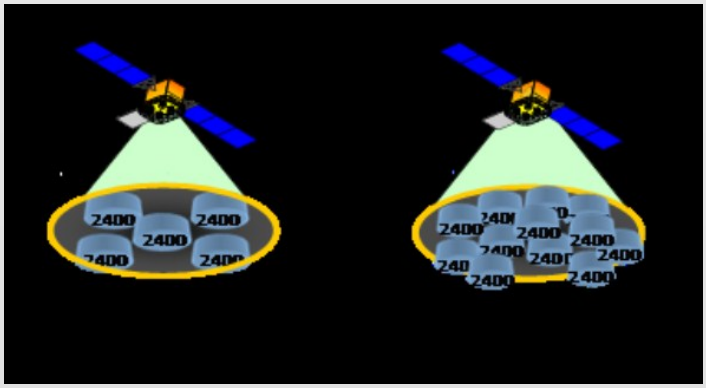
UHF SATCOM systems provide the US Department of Defense (DoD) and other US Government agencies with BLOS communications for tactical operations. UHF SATCOM enables users to operate globally on-the-move and under both severe weather conditions and cluttered ground cover. As the demand for SATCOM has increased in current operations around the world, SATCOM IW (MIL-STD-188-181C, 188-182B and 188-183B) offers a significant increase in capacity over legacy Demand Assigned Multiple Access (DAMA) SATCOM.

SATCOM IW, developed by the US Defense Information Systems Agency (DISA), doubles UHF SATCOM capacity of existing communications services employing Time Division Multiple Access (TDMA) methods, see illustration below. The use of Mixed Excitation Linear Predictive (MELP) voice encoding improves overall voice quality. Additionally, SATCOM IW is faster and easier to set up.

The AN/PRC-148 JEM, an evolution of the battle-proven AN/PRC-148 MBITR, is the smallest, lightest, and most power-efficient tactical handheld radio in use today covering the 30 to 512MHz frequency range. It has a Software Communications Architecture-compliant platform that hosts all of today's core waveforms and enables the integration of program enhancements, additional modes and future waveforms. Like SATCOM IW, these other advanced features are easily available via firmware upgrades.

For the more than 120,000 AN/PRC-148 original MBITRs deployed, there is an MBITR to JEM upgrade program available to get access to the latest AN/PRC-148 JEM features.

For additional information on the MBITR upgrade program, or to purchase the JEM IW feature, part number 1700858-10/11, send an email to:
aftermarket.support@thalescominc.com
Or call Customer Support at: 1-800-914-0303
and select Option 3



DAMA satellite configuration, eight transponders

IW satellite configuration, 16 transponders

Current Tactical Firmware for the AN/PRC-148 family of radios and associated PC Programmers

Please keep the firmware on your radios up-to-date.

Tactical Radios	Type 1 AN/PRC-148(V)3(C) and (V)4(C) JTRS Enhanced MBITR (JEM) PRC6999	Type 1 AN/PRC-148(V)1(C) and (V)2(C) MBITR PRC6991	Non-Type 1 PRC6809
Current Receiver/Transmitter 'brick' part number	4101658-511, -512 Maritime	4101104-501 Maritime	4101422-504 Maritime
	4101660-507, -510 Urban	4101195-501 Urban	4101349-502 Urban
Firmware Version and Revision	Version 07.02.00.0316	Version 2.42 Revision AG	Version 1.19 Revision H
PCCT / PC Programmer Part Number and Revision	MA6941N Version 05.01.03.0000	MA6941F Version 1.12 Revision M	MA6941L Version 1.07 Revision E
PCCT / PC Programmer User's Manual and Revision	84358 Revision K	84333 Revision J	84262 Revision F
Radio Operator's Manual and Revision	84357 Revision J	84329 Revision J	84345 Revision E
Operator's Manual Integrated Waveform (IW) Addendum	84428 Revision A		
Quick Reference Guide (QRG) number and Revision	3400905 Revision G	3400577 Revision J	3400738 Revision C
IW QRG number and Revision	3400905-3 Revision A		
IW Booklet number and Revision	84430 Revision A	Not applicable	Not applicable
	The JEM firmware version is briefly displayed at the end of the power-on Built-In-Test cycle. The PCCT firmware version is displayed from the Help menu.	The MBITR firmware version is briefly displayed at the end of the power-on Built-In-Test cycle. The PC Programmer firmware version is displayed from the Help menu.	The PRC6809 firmware version is briefly displayed at the end of the power-on Built-In-Test cycle. The PC Programmer firmware version is displayed from the Help menu.
	PC Configuration Toolkit Cable (PCCT), part number 1100592-501, is required to upgrade JEM firmware via a USB port on a PC running Windows XP, Vista or Windows 7	PC Programmer Cable, part number 3500393-501, is required to upgrade firmware of MBITRs and PRC6809s via an RS-232 serial port on a PC running Windows XP, Vista or Windows 7	

Current Tactical Firmware for RF Power Amplifiers for the AN/PRC-148 family

MA6943 Vehicle Adapter (VA) part number, part of AN/VRC-111 Vehicle Adapter Amplifier	4101524-501	
VA firmware version and revision	Version 1.11	Revision H
Vehicle Adapter Exciter (VAE) part number	4101849-501	
VAE firmware version and revision	Version 1.05	Revision F
50W Power Amplifier (PA) part number	1600674-x multiple variants	
PA firmware version and revision	Version 02.01.00	Revision D
MA7135 Low Profile Vehicle Adapter (LPVA)	4102214-502	
LPVA firmware version and revision	Version 3.02	Revision E
MA7138 AN/VRC-113 Cradle Vehicle Adapter (CVA)	4102340-501 PA & 4102350-501 Cradle	
CVA firmware version and revision	Version 3.02	Revision E

Current Public Safety Firmware for the Liberty, Thales 25 and associated PC Programmers

Public Safety Radios	Liberty, Multiband LMR	Thales 25 Project 25 VHF Handheld
Receiver/Transmitter 'brick' part number	4102023-502 Intrinsic Safe	4101256-xxx can be -501, -503 or -505
Firmware Version and Revision	Version 06.00.16.0045 Revision F	Version 8.3 for -503 and up Version 5.13 for -501
PC Programmer Part Number and Revision	MA6941U Version 06.00.03.0052 Revision E	MA6941C Version 5.0 Revision H
PC Programmer User's Manual and Revision	84404 Revision D	84330 Revision H
Radio Operator's Manual & Revision	84382 Revision D	84326 Revision G
T25 Quick Reference Guide / Liberty Field Operations Guide	3401448 Revision C	3400539-1 Revision D
	The Liberty's firmware is displayed after the radio is powered on displaying the Statue of Liberty screen.	The T25's firmware is briefly displayed at the end of the power-on Built-In-Test cycle.
	Programming Cable Kit, part number 3100965-501, is required to upgrade Liberty firmware via a USB port on a PC running Windows XP, Vista or Windows 7	Programming Cable, part number 85302, is required to upgrade firmware of Thales 25 via a RS-232 serial port on a PC running Windows XP

Current Firmware for the HF Naval / Maritime products

Model Number	Equipment	Part Number	Firmware Version
TMR 1090	1 kW Linear Power Amplifier	796010-000-001	3.14
TMR 1096	125 W Linear Power Amplifier	796012-000-001	2.32
TMR 3302	Dual ALE Modem	799075-001-002	1.68
TMR 4090	1 kW Antenna Coupler	798012-000-001	1.00
TMR 4095	125 W Whip Antenna Coupler	798011-000-003	2.01
TMR 4096	125 W NVIS Antenna Coupler	798013-000-001	3.05
TMR 6490	Remote Control Unit	799070-000-001	7.10
TMR 6491	Remote Control Unit with External Power Supply	799072-000-001	7.10
TMR 8092	HF Transceiver	794054-000-001	2.74
PA8105	500 W Power Amplifier	634797-00	0032
PA8109	1 kW Power Amplifier	608690-00	0032
ACU50	Antenna Coupler	602229-00	1.0 & 1.6
ACU51	1 kW Antenna Coupler	602229-01	1.0 &1.6
MCU6402	Antenna Multi-coupler	604325-02	Not applicable
MCU6403	Antenna Multi-coupler	604325-00	Not applicable
MCU6412	Antenna Multi-coupler	604324-01	2.08

MANPACK SATELLITE TERMINALS

TAMPA MICROWAVE™ A THALES COMPANY

Tampa Microwave, a company specializing in high performance tactical satellite communication Manpack Satellite Terminals, is now part of Thales Communications, Inc. http://www.tampamicrowave.com/

Tampa Microwave's Manpack Satellite Terminals are specifically designed for the dismounted soldier who will operate in hazardous territories and who may jump and then carry the Manpack in his ruck sack needing high bandwidth, voice, video and data battlefield satellite communication at the tactical level.

Key Terminal Features

- **Auto Assist Pointing**, simple front panel display provides instructions to assist satellite acquisition
- **High performance,** uplink 1 to 2 MBps, downlink 4 to 6 Mbps
- **Extremely field configurable**
  - No tools required
  - Quick change X, Ku or Ka band transceivers
  - Quick-release 65 cm diameter or 90 cm diameter antenna
- **Integrated modem**
- **Internal GPS**
- **Lightweight**, 27 lb
- **Power Input,** 85 to 265 V AC, 47 to 440 Hz, 10 to 36 V DC
  - Battery run time 70 min with single BB-2590 battery; greater than two hours when using keyline feature
- **NVG Compatible**
- **Purposely built for tactical environment,** MIL-STD-810F tested, MIL-SPEC reliability
- **Operational temp –20 to +55 degrees C**

MBITR2™ COMING SOON

Thales is developing a second generation two-channel variant of its Multi-Band Inter/Intra Team Radio (MBITR). The MBITR2 stems from the original variant that was developed in the late 1990s for US Special Operations Command (USSOCOM), and the JTRS Enhanced MBITR (JEM) adapted for special operations.

MBITR2 is a two-channel radio that supports all legacy narrowband waveforms, as well as a wideband waveform. Prototypes have already been fielded to solicit customer feedback.

A Full Motion Video (FMV) Receiver Mission Module is also completing development; with more than 200,000 Thales AN/PRC-148 radios fielded with the US and coalition forces, the FMV Mission Module will be offered as a field upgrade for in-service radios.

Grow and Further Your Skills with Us

See what great **OPPORTUNITIES** await **YOU**

Visit our website **www.thalescomminc.com**
Click-on **Careers**, Click-on **Careers Opportunities,** Click-on **Select View All Open Job Positions**

FREQUENTLY ASKED QUESTIONS

Q: After upgrading (V)3 and (V)4 JEMs to firmware Version 7, will a new PJC key be required ?

A: **Yes**, see table below

PJC Short Title	Radio Configuration	Software Release Version				
		3	4	5	6	7
USKAE B9500 880091 Edition 4	AN/PRC-148(V)3(C), (V)4(C) AN/PRC-148A(V)3(C)	✓	✓	✓	✓	
USKAE B1001 Edition 1	AN/PRC-148(V)3(C), (V)4(C) AN/PRC-148A(V)3(C)					✓
USKAE B10054 880091 Edition 1	AN/PRC-148A(V)5(C) AN/PRC-148A(V)6(C)		✓	✓	✓	✓

Q: Where on the website can I find the programming software and firmware for my radios ?
A: You must register on our website **www.thalescomminc.com** via the Customer Support Customer Sign-in link. Please ensure you select the appropriate area of interest; either 'Tactical Communications' for the AN/PRC-148 family, 'Public Safety' for the Thales 25 hand held radio, 'Liberty Radio', or 'Naval' for our range of maritime HF products.

Approval is not automatic, all requests are reviewed; after approval an acknowledgement e-mail is sent. Users can then sign-in on the website, navigate to 'Technical Resources' and download Operator's Manuals, training presentations, radio firmware etc.
Note that users of the tactical AN/PRC-148 radio family must register with a valid .mil e-mail address.

AN/PRC-148 family questions:

Q: When is the next operator training class at the Thales Communications, facility in Clarksburg, MD?
A: The next JTRS Enhanced MBITR, aka JEM train-the-trainer class in Clarksburg is September 4th through 7th, contact Aftermarket Support at 1-800-914-0303 Option 3 to register.

Q: Is the MBITR PC Programmer and JEM PC Configuration Toolkit compatible with Windows 7?
A: Yes! Both applications are compatible with all Microsoft operating systems from Windows XP through Windows 7.

Q: What does 'NO PJC' flashing on my radio mean?
A: You have a JEM, that has lost its Private Joseki Component (PJC) encryption master key. Please see the PJC User Notice on the Customer Sign-in page of our web site, see link below; this explains the problem in more detail and gives guidance on obtaining the appropriate PJC key.

https://www.thalescomminc.com/customer_care.asp

The PJC key is needed for all encrypted JEM operations, without PJC only Plain Text or Retransmission operations are possible. The User Notice also explains why 'NO PJC' is displayed, that is, a discharged Hold-Up Battery (HUB)!

Q: I'm in FM, Plain Text, but why can't I establish communication?
A: Please ensure the CTCSS tones match, as well as the frequencies. CTCSS tones are programmed in the BASIC channel programming menu, directly under the frequencies. CTCSS tones are shown as R= and T= fields and can be changed in the channel programming menu. The CTCSS tones can also be seen, but not changed, from the Alternate Default Display, viewed by pressing 'ENT' from the Default Display.

Note that 150 Hz is the standard CTCSS tone for all US Combat Net radios, the PRC-119 SINCGARS only operates with a CTCSS tone of 150 Hz. The PRC-148 radios default to 150 Hz CTCSS when in SINCGARS mode.

CTCSS comes into play during FM or NB PT operations. It is recommended that the CTCSS tone is set to 150 Hz, even if you are operating in cypher text.

If you lose crypto unexpectedly, change that channel to plain text, then contact a station on the net. They then change their radio to plain text and communication will be established as long as the CTCSS tones match.

Q: How do I clone / transfer my settings from one radio to another?
A: PRC-148(V)1s and (V)2s are MBITRs, PRC-148(V)3s through (V)6s are JEMs.

Every MBITR and JEM radio is capable of wired cloning using Cloning Cable part number 3500610-501 (NSN 5995-01-558-3583) but you can only clone an MBITR to an MBITR, or a JEM to a JEM.

Over-the-Air-Cloning (OTAC) is an optional feature for JEMs; however, you can only clone from one OTAC-enabled JEM to other OTAC-enabled JEMs.

Q: I have MBITRs and JEMs and I need to put the same frequency plan in them both. How can I do this?
A: There is an import/export function in the MBITR PC Programmer and the JEM PC Configuration Toolkit (PCCT). Please make sure you are using the latest version.

To copy a frequency plan from an MBITR to a JEM, ensure the configuration file has been saved using the MBITR PC Programmer, the file name will end with .cfg Open the JEM PCCT and go to File >> New to open a 'template' for the file. On the PCCT go to File >> Import MBITR Configuration File, then choose the .cfg file you want to import. You may get an error, such as 'Warning -- File Version 1.0.10.0 is not fully supported!' If so, just press 'DONE' and check that all of the MBITR PC Programmer channel parameters are now in the JEM PCCT for you to download into the JEMs. The parameters/features in the radios must match on a channel by channel basis; if there is a mismatch then that channel will be skipped.

To copy a frequency plan from a JEM to an MBITR, save it in the JEM PCCT, the file name will end with .xml Go to File >> Export MBITR Configuration File, press 'DONE' on the pop ups that show, name the file and save it to a location on your computer. It will save as a .cfg file and can be opened with the MBITR PC Programmer.

Q: What is the latest JEM firmware? And is a new PJC key required?:
A: Version 07.02.00.0316. PRC-148 (V)3 and (V)4 radios are JEMs; PRC-148 (V)5 and (V)6 radios are also JEMs but they are for a specific user group and require a different firmware, even though the firmware version numbers are the same. Registered users can download PRC-148(V)3 and (V)4 JEM firmware from our website www.thalescomminc.com but firmware for the PRC-148(V)5 and (V)6 cannot be downloaded from the site.

Note that a new PJC key is required for the PRC-148(V)3 and (V)4 JEMs once they are upgraded to a firmware version of 7.0 or higher, please see chart on Page 10. However a new PJC key is not required for new PRC-148(V)5 and (V)6 JEMs, see chart on Page 10.

Q: How do I put a loadset from my SKL into my MBITR?
A: There is the split load and the non-split load processes for loading a loadset from an SKL. For MBITRs that have a lower firmware version than 2.39, you split COMSEC and TRANSEC during the SKL loadset fill process.

For MBITRs with firmware higher than version 2.39, there is no need to split COMSEC and TRANSEC. When using an SKL, COMSEC and TRANSEC are loaded together using the MBITR's MODE23 keyfill menu. There is a utility file included in the version 2.39 firmware upgrade which makes the upgrade a two-step process.

Please contact Thales Customer Service 1-800-914-0303 option 1 or email customer.service @thalescomminc.com for cheat sheets showing the split load and non-split load fill processes. The steps are also shown in the Operator's Manuals and the training presentations available in Technical Resources on our website.

This utility file is also available on our website in the MBITR firmware version 2.36 folder.

The utility file first erases the existing radio firmware, hence you cannot load the utility file over the existing radio firmware, you load the utility file first, then the new firmware.

JEMs with firmware version 5.0 and higher do not require the split load process but JEMs with firmware lower than version 5.0 do.

The MBITR's COMSEC keyfill menu is the same as the JEM's DS-102 keyfill menu.

Individual crypto keyfill steps are not affected; set the MBITR or JEM to the appropriate keyfill menu, on the SKL select the 'KEYS' tab, select the appropriate key, then select 'Load' and initiate the fill.

Ensure JEMs have the appropriate PJC key loaded. If 'NO PJC' is displayed, the appropriate PJC key must be loaded to accomplish encrypted operations.

Q: How do I connect my radio to a PC to program a frequency plan?
A: It depends on the radio, AN/PRC-148 (V)1 and (V)2 are MBITRs; PRC-148(V)3 through (V)6 are JEMs. The radio type will be displayed when you power the radio on, immediately following the Testing screen, along with the radio's firmware version.

To connect a JEM's side connector to a USB port on a PC, a PC Configuration Toolkit [PCCT] Cable is required, part number 1100592-501, NSN 5995-01-565 -7851, see below.

To connect an MBITR to a serial port on a PC, a PC Programmer Cable is required, part number 3500393-501, NSN 5995-01 -487-1139, see below.

Q: I cannot read the serial number on the radio's data plate, how can I find the serial number?
A: For an MBITR you need the PC Programmer application installed on a computer you have administration rights to. We recommend using the latest version, that is version 1.12 available as a download from Technical Resources on our website after you have signed-in.

Once the MBITR PC Programmer is installed on the computer, ensure the radio's side connector is enabled. If the side connector is enabled, a box symbol is displayed in the upper-right corner of the radio's default display. If you do not see the box symbol, enable the side connector by following these steps: press the ALT and MODE keys together, press the PROGRAM key, press the GLOBAL key, scroll to SIDE/MIC LVL, change SIDE DISABLE to SIDE ENABLE and press ENT. The box symbol will show on the radio's default display.

You can then connect the MBITR to the computer using the MBITR PC Programming cable to connect the side connector to a 9-pin serial port on a PC. On the PC Programmer go to the Tools drop-down menu and select Get Radio Serial Number. The MBITR's electronic serial number will then be displayed.

If you get an error stating the serial number was not found then you must obtain the latest enabler database and try again. Download the database from our website using the Tools menu of the PC Programmer, or Thales Customer Service can send you the enabler database.

An enabler database is a list of all radio serial numbers and the enabled features, for example SINCGARS, Havequick, ANDVT etc.

There are separate enabler databases for MBITRs and JEMs. Each enabler database consists of two encrypted text (.txt) files, if these files are opened as text files, the content is scrambled/meaningless.

The enabler files are on a Thales FTP site and can be downloaded using the MBITR PC Programmer, or JEM PC Configuration Toolkit, PC application by clicking on the Tools drop-down menu and selecting 'Download the latest enabler database'.

For PCs not connected to the internet, please contact Thales Customer Service at 1-800-914-0303 option 1. or send an email* so that the enabler files can be sent to you.

It is important to have a current enabler database so that any new features can be enabled by clicking on the Tools drop-down menu and selecting 'Update radio with factory enabled options'.

You get a JEM's internal serial number using JEM PC Configuration Toolkit (PCCT) Version 5.01.03.0000 or higher. Ensure the JEM's side connector is enabled and connect the JEM to the PC with the PC Toolkit open and the password entered to put the radio in PC Toolkit Session Receive Ready mode, then select Tools on the PC Toolkit and select Show Radio's Enabled Options.

Once you know the internal serial numbers of the radios send Thales Customer Service an email* with the radio types and serial numbers and we can discuss the best way to get you replacement data plates.

*** customer.service@thalescomminc.com**

Q: Can I convert my MBITRs into JEMs by doing a firmware upgrade?
A: No. Although MBITRs and JEMs are almost identical in appearance and operator menu structure, they are two very different hardware configurations; JEMs have more capability than MBITR, such as more features.

JEMs have a USB port for programming frequency plans into the radio, MBITRs have an RS-232 serial port.

2012 Trade Shows	Dates	Location	Booth#
Expeditionary C4 Users' Conference (XC4)	August 14th through 16th	Fredericksburg, VA	
APCO Public Safety Communications Conference	August 19th through 22nd	Minneapolis, MN	501
US Army Maneuver Warfighting Conference	August 18th and 19th	Fort Benning, GA	3400/3401
National Guard Association of the United States (NGAUS), General Conference and Exhibition	September 9th through 12th	Reno, NV	
Modern Day Marine Exposition	September 25th through 27th	Quantico, VA	
APCO Canada	November 5th through 8th	Winnipeg, Canada	
Special Operations Forces Symposium & Exposition (SOFEX)	November 6th and 7th	Fort Bragg, NC	

However, there is an MBITR to JEM Upgrade Program, wherein you turn-in MBITRs to Thales and receive a new JEM at a discounted price.

The hardware of the new JEM will be Integrated Waveform capable (IW) but IW is an optional feature at an additional price, as well as other features such as Over-the-Air-Cloning (OTAC), APCO Project 25 with AES, MELP vocoder for ANDVT operations and SINCGARS FH2.

For a quote please contact Aftermarket Support at 1-800-914-0303 option 3 or send an email to aftermarket.support@thalescominc.com

Q: My computer does not have a nine-pin serial port. What type of USB to serial adapter can I use for MBITR programming and firmware upgrades ?

A: Below is a list of adapters, in order of preference, that have been tested with the latest MBITR PC Programmer Version 1.12, and the latest MBITR firmware, Version 2.42.

- SeaLevel USB to RS-232 DB-9 serial adapter
  Part number 2105R
  Download drivers from:
  www.sealevel.com
- Dynex USB/PDA Serial Adapter
  Part number DX-UBDB9
  Download drivers from:
  www.dynexproducts.com
- Belkin USB to Serial Adapter
  Part number F5U409
  Download drivers from:
  www.belkin.com

You do not need a USB to serial adapter with the JEM, the computer programming interface is already USB.

Q: Do I need a Material Safety Data Sheet (MSDS) to ship AN/PRC-148 batteries?

A: No! Since January 1st 2009 the Class 9 criteria is based on the Watt hour rating of the battery. In 2008 the criteria was based on the Equivalent Lithium Content [ELC] in grams, now it is based on the Watt hour rating of the battery.

Therefore Watt [Wh] hour rating is calculated by multiplying the voltage of each cell by the Ampere hour rating of each cell and then multiplying that by the number of cells in the battery. For our 4.8 Ah Lithium-Ion rechargeable battery, part number 1600515-7, there are six cells each with a maximum voltage of 4.2 V and Ampere hour rating of 2.4 Ah; therefore, the Watt hour rating is 4.2 x 2.4 x 6 = 61 Wh, this is less than the IATA Class 9 Hazardous Material limit of 100 Wh.

For our 5.8Ah battery, part number 1600686-2, there are six cells each with a maximum voltage of 4.2 V and Ampere hour rating of 2.9 Ah; therefore, the Watt hour rating is 4.2 x 2.9 x 6 = 73 Wh, this is also less than the IATA Class 9 Hazardous Material limit of 100 Wh.

Therefore, from a transportation point of view, a Material Safety Data Sheet [MSDS] is not required.

Our batteries have been tested to meet the requirements of each test in the UN Manual of Tests and Criteria, Part III, subsection 38.3

Q: What is wrong here?

A: The SINCGARS blade antenna is folded-up which significantly reduces the communication range/distance; for best SINCGARS band range/distance the antenna should definitely be unfolded.

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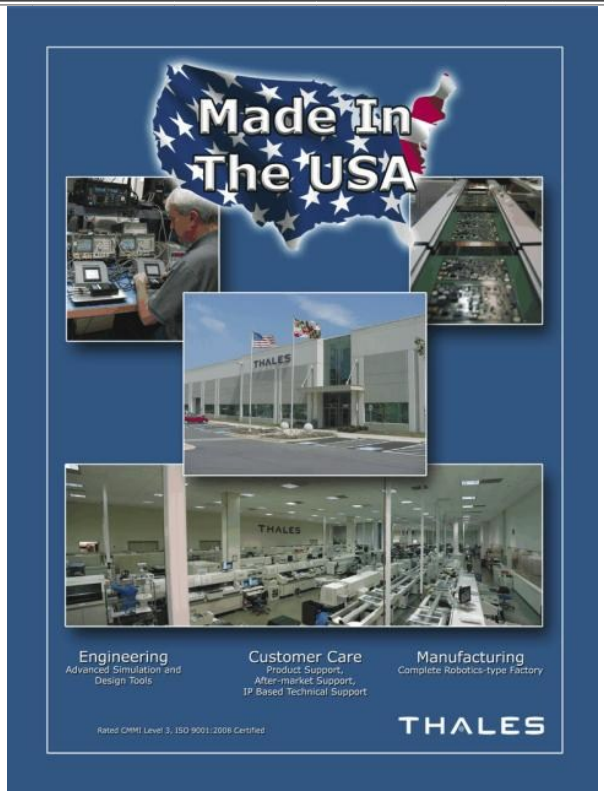
www.thalescomminc.com



LIVES DEPEND ON WHAT WE DO

Thales Communications is a global leader in the development, manufacture and support of battle-proven, software-defined, radio equipment and solutions. We serve the ground, naval, airborne, and homeland security domains with tactical electronic equipment, and information systems that address the technological and environmental challenges presented in real-world situations — especially those with size, weight, and power constraints. Serving the US Department of Defense, US Department of Homeland Security, US civilian agencies, and allied and coalition forces globally, Thales Communications plays a direct role in the Global War on Terror.

Thales Communications' headquarters campus in Clarksburg, Maryland, houses state-of-the-art manufacturing facilities, business development groups, as well as our 24/7 Customer Support Department. We also provide in-theater support to US and Coalition Forces in Afghanistan, Iraq and Kuwait.

The Customer Support Department

Customers who call the Customer Service 1-800 number are now given three options to properly route their requests: **Technical Assistance**, **Repairs/Product Support** and **Sales /Aftermarket Support**. Incoming calls are routed to the appropriate Customer Service Specialist to ensure all inquiries are addressed as quickly as possible.

To contact **Customer Service**, please call us at:

1-800-914-0303

For International Customers: (+1-240-864-7643)

Option 1.

TECHNICAL assistance and general inquiries
technical.support@thalescomminc.com

Option 2.

REPAIRS Return Material Authorization (RMAs) and other product support assistance

Option 3.

SALES for spares and ancillary items, to request quotes and make purchases, web site/shopping cart assistance